REMARKS/ARGUMENTS

Favorable reconsideration of this application is respectfully requested.

Claims 1-30 are pending in this application. Claims 11-30 stand withdrawn from consideration.

Claims 1-5 and 7-8 were rejected under 35 U.S.C. § 103(a) as unpatentable over applicants' admitted art Figure 1B in view of U.S. patent 6,498,094 to Nakao et al. (herein "Nakao"). Claims 6 and 9 were objected to as dependent upon a rejected base claim.

Initially, applicants gratefully acknowledge the indication of the allowable subject matter in claims 6 and 9.

Addressing now the rejection of claims 1-5, 7, 8, and 10 under 35 U.S.C. § 103(a) as unpatentable over applicants' admitted art of Figure 1B in view of Nakao, that rejection is traversed by the present response.

Applicants respectfully submit that the noted combination of teachings of the admitted art of Figure 1B and Nakao would not have been suggested to one of ordinary skill in the art.

With respect to the above-noted rejection the outstanding Office Action states:

> The applicant's admitted prior art fails to show the conductive layer having a surface higher than highest surface of the first insulating layer surrounding and adjoining the trench.
>
> Nakao et al. is cited for showing a method for providing a contact hole formed in an insulating film. Specifically, Nakao et al. shows, referring to figure 8(c), a conductive layer 41 having a surface thereof higher than a highest surface of the first insulating film. It would have been obvious to one of ordinary skill [in the] art to use the conducting layer of Nakao et al. with the device of the applicant's admitted prior art ***for the purpose of helping to resist oxidation***.[1]

Applicants respectfully submit that the motivation noted above to combine the teachings of Nakao to those of the admitted art, namely "helping to resist oxidation", is

[1] Office Action of May 20, 2004, page 3, lines 13-19 (emphasis added).

irrelevant to the teachings of the admitted art, and that thereby it would not have been suggested to one of ordinary skill in the art to combine the teachings of Nakao to those of the admitted art.

First, applicants note that the teachings in Nakao with respect to the conductive layer 41 in Figure 8(c) are directed to a capacitor having a high dielectric layer formed on the conductive layer 41, which is described as a plug made of platinum in Nakao. In Nakao the capacitor is an essential element, see for example capacitors 28 of Figures 2, 4, 6, and 7. The manufacturing process of the capacitor in Nakao requires an annealing process in an oxygen atmosphere so that the capacitor retains its properties (see Nakao at column 1, lines 58-61).

As the device in Nakao requires such an annealing process in an oxygen atmosphere, Nakao utilizes the plug 41 composed of platinum that is resistant to oxidation during the annealing process because electrical conduction between the transistor 17 and the capacitor 28 is not impaired even when oxygen is diffused into the plug 41.[2] Thus, an object of the device of Nakao is to provide a structure of conducting layers that avoid being oxidized by such an annealing process.

However, applicants respectfully submit that such teachings in Nakao have no relevance whatsoever to the admitted art of Figure 1B. More particularly, the admitted art of Figure 1B is not directed to a capacitor having a high dielectric layer, but instead is directed to a contact hole 280 on a conductive layer 250. For the formation of the device of the admitted art of Figure 1B, annealing in an oxygen atmosphere is ***not necessary***. Thus, the admitted art of Figure 1B does not suffer from a problem regarding oxidation during an annealing. Therefore, the teachings of "helping to resist oxidation" in Nakao would not have any relevance whatsoever to the device of the admitted art of Figure 1B as Nakao teaches

[2] Nakao et al. at column 12, lines 46-51.

helping to resist oxidation in an annealing process, and an annealing process is not even performed in the device of the admitted art of Figure 1B.

Moreover, applicants note that in the admitted art of Figure 1B the anti-diffusion film 260 covers the Cu wiring (conductive layer) 250. The anti-diffusion film 260 has a function of preventing oxidation of the Cu wiring 250 (see for example the present specification at page 7, lines 11-13). For such further reasons it is unnecessary to apply any teachings in Nakao to resist oxidation as the admitted art of Figure 1B also already has a structure for that purpose (although not oxidation resulting from an annealing).

In such ways, applicants respectfully submit that the combination of teachings of the admitted art in view of Nakao would not have been suggested to one of ordinary skill in the art to meet the claim limitations. Thus, applicants respectfully submit that independent claim 1, and the claims dependent therefrom, patentably distinguish over the applied art.

As no other issues are pending in this application, it is respectfully submitted that the present application is now in condition for allowance, and it is hereby respectfully requested that this case be passed to issue.

Respectfully submitted,

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